

# **A COMPARATIVE STUDY OF SIMPLE AUDITORY REACTION TIME AND TACTILE SENSITIVITY IN BLIND AND SIGHTED INDIVIDUALS**

## **ABSTRACT**

**BACKGROUND:** In everyday life blind humans rely more on auditory and tactile senses to recognize people, localize events and to perform various tasks. It is presumed that blind people can hear better and have an intensified tactile sense than sighted people which may be due to cross modal plasticity. Auditory reaction time and tactile sensitivity are ideal tools for assessing sensory motor association. Its practical implications to improve the independence, self esteem, occupational opportunity and quality of life may be of great importance in blind people. **AIM AND OBJECTIVE:** To determine and compare simple auditory reaction time and tactile sensitivity in blind and sighted subjects and to analyse various factors like age, sex, body mass index that influence them. **MATERIALS AND METHODS:** The study included 100 blind and 100 normal sighted subjects. A detailed information about the study was given and informed consent was obtained. The study population were adults between 18-60 years old. The subjects who were deaf, dumb or both and those who suffered from any neurological and psychiatric disorders were excluded. In a sound treated room, the simple auditory reaction time was measured using DIRECT RT software and tactile sensitivity threshold was measured in the index finger of dominant hand using Semmes Weinstein Monofilament. **RESULTS:** The mean value of ART for blind and normal were  $181.890 \pm 17.742$ ,  $207.990 \pm 38.336$  msec respectively. The mean value for TST in blind and normal were  $2.379 \pm 0.624$ ,  $155 \pm 0.633$  evaluator size respectively. **CONCLUSION:** A significant difference exists between normal sighted and blind individuals in both auditory reaction time and tactile sensitivity threshold and the age of onset of blindness has an influence. Both ART and TST increased as age increases whereas gender and BMI has no influence on blind.

## **KEY WORDS**

Blind, Auditory Reaction Time, Tactile Sensitivity Threshold, Cross modal plasticity